

Columbia Downtown

Addendum to Traffic Analysis

Issued: November 17, 2006

ADDENDUM TO TRAFFIC ANALYSIS

On June 27, 2006, the Department of Planning and Zoning (DPZ) published the results of the *Traffic Analysis of Charrette Master Plan Program Development*, prepared by the engineering firm of Glatting Jackson Kercher Anglin Lopez Rinehart, Inc. and presented by firm principal Walter Kulash before the Columbia Downtown Focus Group at their meeting on July 12, 2006. The Focus Group (FG) and others raised a number of questions to which this addendum responds. DPZ also asked Glatting Jackson to provide an increased level of refinement to the data provided in several of the Tables included in the report.

Roadway Improvements Assumed

In response to DPZ and FG requests for specific clarification of the roadway improvements assumed by Glatting Jackson in *Traffic Analysis*, Mr. Walter Kulash responded as follows:

Roadway Improvements Assumed in Traffic Analysis

The assumed improvements are the future streets shown on the Charrette Master Plan and listed on pages 1 and 2 of the report:

- Extension of South Entrance Road northbound into Corporate Boulevard and the Mall
- Continuous east-west collector street aligned with Corporate Boulevard extending to BLP
- Continuous north-south (Wincopin) street, through the Lakefront district, extending to LPP
- Reconfigured Symphony Woods Circle, providing a major collector to BLP/HRR and SER

In addition, the assumed improvements include the following, which was noted in the August 2005 Traffic Impact Study prepared by Wells and Associates:

- Restriping of southbound approach of BLP at HRR and additional westbound left turn lane

Potential Roadway Improvements Not Included in Traffic Analysis

- South Entrance Road interchange improvements to either a full-interchange design or three-quarter design (adding a northbound ramp)
- Triple left at Governor Warfield Parkway onto Little Patuxent Parkway at northern intersection
- Widening of the MD175 bridge which crosses over MD29
- Increased transit connecting to major regional destinations

Excess Capacity under the Total Master Plan Program and Option A

Tables 4 and 5 in the report showed many intersections carrying 100% of the Master Plan traffic. In many cases the intersection appeared to have significant excess capacity after accommodating the total program or the Option A program. To understand the magnitude of excess capacity at intersections in Downtown, DPZ requested that excess capacity be included in the analysis. Glatting Jackson included total percentages of capacity for all intersections that exceeded 100 % in the revised Table 4 and Table 5. For ease of reference, DPZ has highlighted the new figures contained in the attached Table 4 and Table 5. DPZ also asked Glatting Jackson to provide the complete data to demonstrate the Option A percentages in Table 5, column "A" for all intersections. Appendix A-1 is an entirely new table that lists the excess capacity and the percent of the Master Plan increment that can be accommodated in each of the intersections.

Text Changes

Pursuant to the additional information contained in Table 4, Table 5 and Appendix A-1, the following text changes needed to be made to the report:

Page 5, ¶ 8, Lines 3-4: (*Table 4, Column 8 6*).

Page 7, ¶ 5: The results of this analysis (Table 5 **and Appendix A-1**) show that program reduction option “A” (reduction in office space from 5.2 MSF to 2.55 MSF) brings CLV to below 1,600 at ~~all intersections except Governor Warfield (north)/Little Patuxent. However, even this intersection almost meets the 1,600 CLV criteria, exceeding it by only 92~~ **eight of the twelve intersections studied. Of the four intersections with CLV in excess of 1,600, the one carrying the least percentage of the Option “A” program is Governor Warfield/(North) Little Patuxent, accommodating 63 percent of the program. Two other intersections – Broken Land/Little Patuxent and South Entrance/Little Patuxent – carry 82-83 percent of Option “A.” Broken Land/Hickory Ridge carries 97 percent.**

DPZ Summary Table

In evaluating Glatting Jackson’s *Revised Traffic Analysis* and discussing the findings with Walter Kulash, DPZ confirmed that Table 5 depicts the percent of the Master Plan increment program that can be accommodated at the intersections. The “increment” is the additional development proposed by the Charrette Plan in excess of the Master Plan prepared by GGP in spring 2005. The Glatting Jackson figures do not show what percent of existing and proposed development could be handled by the intersection under the total program or Option A after the development has been built out. The attached table, DPZ Summary of Intersection Capacity, is provided for information only and was not included in the Addendum materials prepared by Glatting Jackson. For Option A, eight of the twelve intersections would have excess capacity, and would be able to handle more than 100% of DPZ’s recommended development program. Of the four intersections with a CLV in excess of 1600, all can accommodate 88 to 99 percent of the existing and projected traffic.

Table 4
Percent of Total Master Plan Program Accommodated within Various CLV Guidelines

Intersection	CLV w/Master Plan (1)	CLV, w/o Master Plan (2)	CLV Increment due to Master Plan (3)	Guideline for Critical Lane Volume (CLV)			
				1,450 CLV		1,600 CLV	
				Excess CLV (4)	% of Master Plan Carried (5)	Excess CLV (6)	% of Master Plan Carried (7)
1. Broken Land Pkwy/Little Patuxent Pkwy	1,742	1,191	551	292	47	142	74
2. South Mall Access/Little Patuxent Pkwy	1,001	529	472	(449)	195	(599)	227
3. South Entrance Rd./Little Patuxent Pkwy	2,258	663	1,595	808	49	658	59
4. Little Patuxent Pkwy/East Mall Access	1,650	813	837	200	76	50	94
5. Little Patuxent Pkwy/Wincopin Cir	1,595	707	888	145	84	(5)	101
6. Little Patuxent Pkwy/Sterrett Pl	1,517	905	612	67	89	(83)	114
7. Little Patuxent Pkwy/Gov Warfield Pkwy N	2,035	1,408	627	585	7	435	31
8. Windstream Terr/Gov. Warfield Pkwy	1,042	878	164	(408)	349	(558)	440
9. Gov. Warfield Pkwy, S/Twin Rivers Rd.	1,164	820	344	(286)	183	(436)	226
10. Gov. Warfield Pkwy, S/Little Patuxent Pkwy	1,261	952	309	(189)	161	(339)	210
11. Broken Land Pkwy/Hickory Ridge Rd	1,609	1,265	344	159	54	9	97
12. Hickory Ridge extended/South Entrance Rd	1,705	285	1,420	255	82	105	93

Column 1: Table 3, Column 3.

Column 2: *Columbia Town Center Master Plan Traffic Impact Study*, Howard County, Maryland, Wells and Associates, LLC, August 12, 2005.

Column 3: Column 1 – Column 2

Columns 4, 6: Column 1 less 1,450 and 1,600 respectively. “Excess” CLV is negative, indicated by () where CLV with Master Plan (Column 1) is less than guidelines of 1,450 or 1,600.

Columns 5, 7: 100% less ratio of Column 4/Column 3 and Column 6/Column 3, respectively.

Table 5
Impact of Program Reduction

Intersection	Percent of Program Accommodated at 1,600 CLV		
	Full Charrette Master Plan Program	Program Reduction Options	
		"A"	"B"
1. Broken Land Pkwy/Little Patuxent Pkwy	74	82	Greater than 100%
2. South Mall Access/Little Patuxent Pkwy	227	227	Greater than 227%
3. South Entrance Rd./Little Patuxent Pkwy	59	82	Greater than 100%
4. Little Patuxent Pkwy/East Mall Access	94	236	Greater than 236%
5. Little Patuxent Pkwy/Wincopin	101	135	Greater than 135%
6. Little Patuxent Pkwy/Sterrett Pl	114	772	Greater than 772%
7. Little Patuxent Pkwy/Gov Warfield Pkwy N	31	63	Around 100%
8. Windstream Terr/Gov. Warfield Pkwy	440	448	Greater than 448%
9. Gov. Warfield Pkwy, S/Twin Rivers Rd.	226	289	Greater than 289%
10. Gov. Warfield Pkwy, S/Little Patuxent Pkwy	210	284	Greater than 284%
11. Broken Land Pkwy/Hickory Ridge Rd	97	97	Greater than 100%
12. Hickory Ridge extended/South Entrance Rd	93	154	Greater than 154%

Full Charrette Master Plan Program percentage from Table 4, Column 7

Program Reduction Option "A" from Appendix A.

Option "B" estimated by scaling down CLVs in proportion to program reduction.

Program Reduction Options:

(A) Reduce office space from 5.2 million square feet (MSF) to 2.55 MSF.

(B) Reduce residential from 5,500 DU to 3,200 DU, office from 5.2 MSF to 2.55 MSF, and retail from 750 KSF to 425 KSF.

(C) Not tested; further reductions not needed to meet 1,600 CLV

Appendix A-1

Percent of Total Master Plan Program, Option “A” Accommodated within Various CLV Guidelines

Intersection	CLV w/Master Plan (1)	CLV, w/o Master Plan (2)	CLV Increment due to Master Plan (3)	Guideline for Critical Lane Volume (CLV)			
				1,450 CLV		1,600 CLV	
				Excess CLV (4)	% of Master Plan Carried (5)	Excess CLV (6)	% of Master Plan Carried (7)
1. Broken Land Pkwy/Little Patuxent Pkwy	1,683	1,191	492	233	53	83	83
2. South Mall Access/Little Patuxent Pkwy	1,001	529	472	(449)	195	(594)	227
3. South Entrance Rd./Little Patuxent Pkwy	1,811	663	1,148	361	69	211	82
4. Little Patuxent Pkwy/East Mall Access	1,146	813	333	(304)	191	(454)	236
5. Little Patuxent Pkwy/Wincopin Cir	1,369	707	662	(81)	112	(231)	135
6. Little Patuxent Pkwy/Sterrett Pl	995	905	90	(455)	605	(605)	772
7. Little Patuxent Pkwy/Gov Warfield Pkwy N	1,690	1,408	282	240	15	90	68
8. Windstream Terr/Gov. Warfield Pkwy	1,039	878	161	(411)	355	(561)	448
9. Gov. Warfield Pkwy, S/Twin Rivers Rd.	1,090	820	270	(360)	233	(510)	289
10. Gov. Warfield Pkwy, S/Little Patuxent Pkwy	1,180	952	228	(270)	218	(420)	284
11. Broken Land Pkwy/Hickory Ridge Rd	1,609	1,265	344	159	54	9	97
12. Hickory Ridge extended/South Entrance Rd	1,141	285	856	(309)	136	(459)	154

Column 1: Figures calculated based on reduced office levels.

Column 2: *Columbia Town Center Master Plan Traffic Impact Study*, Howard County, Maryland, Wells and Associates, LLC, August 12, 2005.

Column 3: Column 1 – Column 2

Columns 4, 6: Column 1 less 1,450 and 1,600 respectively. “Excess” CLV is negative, indicated by () where CLV with Master Plan (Column 1) is less than guidelines of 1,450 or 1,600.

Columns 5, 7: 100% less ratio of Column 4/Column 3 and Column 6/Column 3, respectively.

DPZ Analysis of Traffic Study Addendum

DPZ SUMMARY OF INTERSECTION CAPACITY

**Percent of Total Traffic (Existing plus Master Plan Program and Option "A" Program)
Accommodated within Various Critical Lane Volume (CLV) Guidelines**

Intersection	Total CLV w/ Total Master Plan (1)	CLV for Total Plan				Total CLV w/ Option A Master Plan (6)	CLV for Option A			
		1,450 CLV		1,600 CLV			1,450 CLV		1,600 CLV	
		Excess CLV (2)	% of Traffic Carried (3)	Excess CLV (4)	% of Traffic Carried (5)		Excess CLV (7)	% of Traffic Carried (8)	Excess CLV (9)	% of Traffic Carried (10)
1. Broken Land Pkwy/Little Patuxent Pkwy	1,742	(292)	83%	(142)	92%	1,683	(233)	86%	(83)	95%
2. South Mall Access/Little Patuxent Pkwy	1,001	449	145%	599	160%	1,001	449	145%	599	160%
3. South Entrance Rd./Little Patuxent Pkwy	2,258	(808)	64%	(658)	71%	1,811	(361)	80%	(211)	88%
4. Little Patuxent Pkwy/East Mall Access	1,650	(200)	88%	(50)	97%	1,146	304	127%	454	140%
5. Little Patuxent Pkwy/Wincopin Cir	1,595	(145)	91%	5	100%	1,369	81	106%	231	117%
6. Little Patuxent Pkwy/Sterrett Pl	1,517	(67)	96%	83	105%	995	455	146%	605	161%
7. Little Patuxent Pkwy/Gov Warfield Pkwy N	2,035	(585)	71%	(435)	79%	1,690	(240)	86%	(90)	95%
8. Windstream Terr/Gov. Warfield Pkwy	1,042	408	139%	558	154%	1,039	411	140%	561	154%
9. Gov. Warfield Pkwy, S/Twin Rivers Rd.	1,164	286	125%	436	137%	1,090	360	133%	510	147%
10. Gov. Warfield Pkwy, S/Little Patuxent Pkwy	1,261	189	115%	339	127%	1,180	270	123%	420	136%
11. Broken Land Pkwy/Hickory Ridge Rd	1,609	(159)	90%	(9)	99%	1,609	(159)	90%	(9)	99%
12. Hickory Ridge extended/South Entrance Rd	1,705	(255)	85%	(105)	94%	1,141	309	127%	459	140%

NOTES:

Master Plan Total Program

Column 1: Table 3, Column 1.

Columns 2, 4: Column 1 less 1,450 and 1,600 respectively. "Excess" CLV is negative, indicated by () where CLV with Master Plan (Column 1) is less than guidelines of 1,450 or 1,600.

Column 3, 5: 1,450 and 1,600 respectively divided by Column 1 to show % of program accommodated.

Master Plan Option A Program (Reduced Office)

Column 6: Table A-1, Column 1.

Columns 7, 9: Column 6 less 1,450 and 1,600 respectively. "Excess" CLV is negative, indicated by () where CLV with Master Plan (Column 6) is less than guidelines of 1,450 or 1,600.

Column 8, 10: 1,450 and 1,600 respectively divided by Column 6 to show % of program accommodated.

Highlighted cells show where an intersection can handle less than 100% of the projected traffic volume for the proposed development program.